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ABSTRACT

Significant changes in the educational environment have inspired structural and functional redefinitions to increase institutional competitiveness. To flourish, colleges now must be able to respond quickly and effectively to change. They must be adaptive, flexible, responsive, and innovative, especially in their application of new technology. They must focus on workforce development as well as general education and develop human and technological potential in students. Colleges must respond to change holistically, using all aspects of the organization. Known as "discontinuity," this paradigm of change is new, and is characterized by four hallmarks: (1) a qualitatively changing environment for enterprises; (2) a need to redefine institutional capabilities; (3) a notable loss of effectiveness within traditional organizational structures; and (4) an increase in competitiveness for enterprises that design and apply new response strategies. To remain viable, colleges need to redesign their structures and functions to accommodate these changes, as well as recruit a more diverse client base. Ultimately, clients are the "raison d'etre" of educational institutions, and colleges must always provide the best products and services at a realistic cost to those who are eager for them. Appendices include visual aids for presentation of information. (EMH)

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**DIVERSITY BY DESIGN:
TECHNOLOGY, TEAMWORK, AND TEACHING**

**The Eleventh Annual ERCBEC:
Total Quality Education Conference**

Diversity in Teaching

Asheville, North Carolina

March 19, 1998

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Introduction: Theory into Practice

With approximately 650 days remaining until the millennium, the only societal constant is change. Those companies and educational institutions that survive into and thrive in the 21st century must be able to respond quickly and effectively to a new paradigm. Theorists refer to this new change paradigm as "discontinuity." Organizations are required to build new configurations, use new strategies, design new work, create new formal structural arrangements, and make new demands on personnel.¹ The new paradigm emphasizes essential capabilities: adaptiveness, flexibility, responsiveness, and application of new technology. Those organizations that seek to manage discontinuous change will learn to act at a faster rate than their competitors. Further, all members of the organization will learn to anticipate and manage large scale divergence from previous practice.

The transition will not be easy. Most of the elements that structure organizational culture reinforce stability. They are designed to ensure that variations are diffused over time. The goal is to absorb them, thereby returning the organization to the status quo, especially to past policies and practices. There are three destabilizing forces that make reliance on past practice untenable. First, most of the changes impacting on organizations are pressing, even "life threatening." They are too all encompassing to be absorbed. Second, most of these changes are external. New competition,

new technology, shifts in fundamental market structure, or rapid growth opportunities all impact on the organization from the larger society. To remain viable within their particular contexts, organizations are forced to respond holistically to these challenges. Finally, the response involves all aspects of the organization. The result is an alteration of what the organization is and how it is perceived by both members and clients.

There are four hallmarks emerging that characterize discontinuous change as we approach the 21st century. They are:

- The environment for enterprises is changing qualitatively.
- Redefinition of organizational capability is essential to sustainable competitive advantage.
- Traditional organizational structures are becoming less effective.
- Enterprises that design and apply new response strategies will increase in competitiveness.

These hallmarks have a strong theoretical base.

Organizations need to provide a context for practice that will test their validity.

The 21st Century College

The growth and vitality of organizations is largely a personnel dimension. Leaders must craft sustainable competitive strategies; team members must design delivery systems that build the organization's capacity to implement the strategies. Finally, leaders, team members, and clients

must work cooperatively to balance a process for managing incremental and discontinuous change. Is there a context within which this paradigm is being applied?

Diane Oblinger, academic program manager of higher education at IBM, suggests . . . "community colleges have been highly responsive to the needs of their learners and their communities. For this trend to continue they [must] listen to learners [and consumers], use what they know about cognition, collaboration, communication, and competition, to . . . better serve both learners and society."² Are there specific strategies that will make her vision real?

KnowledgeSoft, Inc. is a technology consulting firm that works with community colleges in designing systems for managing change. They suggest that "an infrastructure is only valuable if it is designed to support valid work processes and good people. The focus must be on workforce development and knowledge management. Therefore, we must develop human potential as fast as we grow technological potential by implementing a continuous learning process."³ There are five steps to the process.

- Increase Market Value--Continuous learning allows the college to compete for new markets thereby developing new revenue opportunities. Public support and client recruitment are based on the perceived ability to generate valuable new products and services.
- Sustain Competitive Advantage--Managing discontinuous change permits the college to create efficient workflow. Further, new options, partnerships, and service teams increase the rate of response while reducing the cost of products and services.

- Adapt New Technology--The emergence of new technologies that integrate well with continuous learning provides a unique opportunity for community colleges. Interactive computers, laser disks, CD-ROM systems, and the Internet allow for the continuous reengineering of learning strategies that make learning a viable coping strategy for engaging constant change.
- Open New Markets--The over-all depreciation of traditional markets in a changing service area makes new market development essential. The blend of new technology and continuous learning provides a rich environment for niche identification. The result is new markets drawing upon new delivery systems.
- Attract New Talent--A broadened client base and enhanced rate of delivery is a goal of change management. Personnel who once considered community colleges too traditional are now willing to develop collaborations. The result is new talent and a renaissance of talent redeployment from traditional staff.

The 21st century college will look significantly different.

The structure, clients, use of time, and definitions of success are being reengineered. How will these new designs affect programs?

Program Framework

The capacity of community colleges to thrive in an environment of discontinuous change depends on its ability to make internal modifications in response to external conditions. These changes demand new roles, relationships, skill sets, and operating methods. The logical site for these new responses is the program. Community colleges have designed programs uniquely suited to their service areas. Appendix A demonstrates how serious the workforce development mismatch has become. The result is the identification of a training/development imperative and an opportunity for

blending new technology with the college's training expertise. Blustain provides a five factor design for program reengineering.

- Align with Market Goals--Strategy and goals are required but they cannot be developed in a vacuum. Clients are the *raison d'etre* of the college. They will not linger if programs do not deliver the right product or service in a timely fashion and at a cost effective level. Shared goals and strategies allow a synergy to develop.
- Continuous Process of Development--Development must be tied to what the college seeks to achieve and the service area demands. Essential questions include: How well does the program achieve its intended purpose; is the program aligned with the expectations of all parties within and outside the college who have a stake in the proposed outcomes; and is there sufficient flexibility within the college to ensure that the program is responsive to ever changing circumstances?
- Identify ROI Measures--Every program needs to determine the cost of performing a service or delivering a product [credit hour or degree]. Attention must be given to variables including time, direct costs, indirect costs, equipment impact, and organizational energy expended. Also, program personnel must be seeking new partnerships and economies of scale that increase both effectiveness and efficiency.
- Multiple Level Participation--College personnel have grown accustomed to the Byzantine nature of existing structures. Managing discontinuous change requires the restructuring of traditional service delivery areas into self-directed teams. Members will be drawn from multiple levels within the college. The new design will allow the college to respond rapidly to client needs with a minimum of bureaucratic red tape.
- Facilitate Learning--All members of the college staff must become part of a learning community. The group will study its processes using the contexts of client satisfaction and competitor effectiveness. Designs to improve product or service delivery will be the result of continuous learning across the college. Finally, the process will institutionalize change management and continuous improvement will become the core of the college's culture.⁴

These structural modifications are essential, but only a part of the required redesign demanded by the management of discontinuous change. What functional adaptations are required?

Developmental Principles

Setting the climate for functional change is a multifaceted and demanding task. Essential elements include risk taking, team building, cross structure collaboration, and accountability in working toward common goals.

Appendix B provides a visual representation of the process. The core is a blend of interpersonal skills and technical applications. The new paradigm is based on the application of self-directed work groups and team building. Napier, et.al., provides five principles of development that circumscribe the effort.

- Leadership Imperative--For success, the leadership team must be visible and involved. Yet, they must empower a coalition of personnel throughout the organization to champion the change initiative. Courage is the hallmark of these role models.
- Team Learning--Unlocking the potential inherent in groups is one of the great challenges of institutional change. Therefore, the process needs to leverage the inherent analytical and creative talent of all college personnel. The resultant group learning is the source of strategies and tactics for change management.
- Infusing Trust--Trust is another hallmark of successful change management. Therefore, time must be given to developing strong, positive relationships among people. Sharing information, removing hierarchies, working collaboratively, and seeking leadership at all levels are critical incidents in trust building and change management.

- Mapping New Paradigms--all college personnel must expand their existing frames of reference. Emphasis must be placed on developing new ways of thinking. Also, all participants must collaborate in developing a common systemic or holistic view of the college. The resulting "new paradigms" are essential for identifying breakthrough solutions.

Linking Resources and Change--Once a change management strategy is designed, the initiative must receive support. Funding as well as staff allocation, which frees those involved from existing responsibilities, are essential. As the strategy is institutionalized, the resources become a component of the college's operating budget. The integration communicates the importance of continued change management and the allocation of scarce resources to the highest priority initiatives.⁵

With structure and function under redesign, the college is provided with a challenging opportunity to strengthen the institution and make it a viable environment for employee and client growth. What formative assessment elements are available as benchmarks for progress?

Conclusion: Diversity--Is It Worth the Effort?

The 21st century promises colleges an ever more diverse client base. Further, the nature of the challenge will require quick response, technical sophistication, and increased collaboration. The requirements are daunting but colleges cannot dodge the responsibility to provide quality--the best products and services at a realistic cost--to those who are eager for them, no matter how diverse. Chabotar and Knutel provide four characteristics that may be used to assess the initiative.

- Establish a Conceptual Framework--Inform all stakeholders of the purpose and direction of change. State openly the goals to be achieved. Be specific

about the strategies under review including technology, team redesign, and teaching reform.

- Use a Broad Participative Design--Involve as many members of the college community as possible in the process. Gather data through a structural and free-form design. Share results broadly across the college. The design will elicit significant "buy-in" and individual ownership.
- Apply Comprehensive Assessment Techniques--Begin the process with a pilot application if possible. Document the pilot application carefully to ensure complete understanding. Finally, ensure that multi-level evaluation is a component of full scale change management. The resulting data is the raw material for institutionalizing change management.
- Allocate a Viable Resource Base--Fiscal resources, staff time, and technology are essential to success. Their absence will contribute to failure. If change management is worth the effort, make the investment needed for success.⁶

These characteristics will create an environment conducive to enhancing diversity through managing discontinuous change.

Appendix C suggests why the process is important. Colleges that can be partners in creating a 21st century workforce need not fear the future. Ann-Lee Verville, general manager of education and technical computing for IBM, describes the challenge as "one we must face together--business and education united as a team to refocus our efforts on teaching students how to learn and how to use information and technology as competitive tools--so they are well prepared for a natural transition from the classroom to the office and back again."⁷ The needs of an ever more diverse clientele make this effort essential.

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APPENDIX A

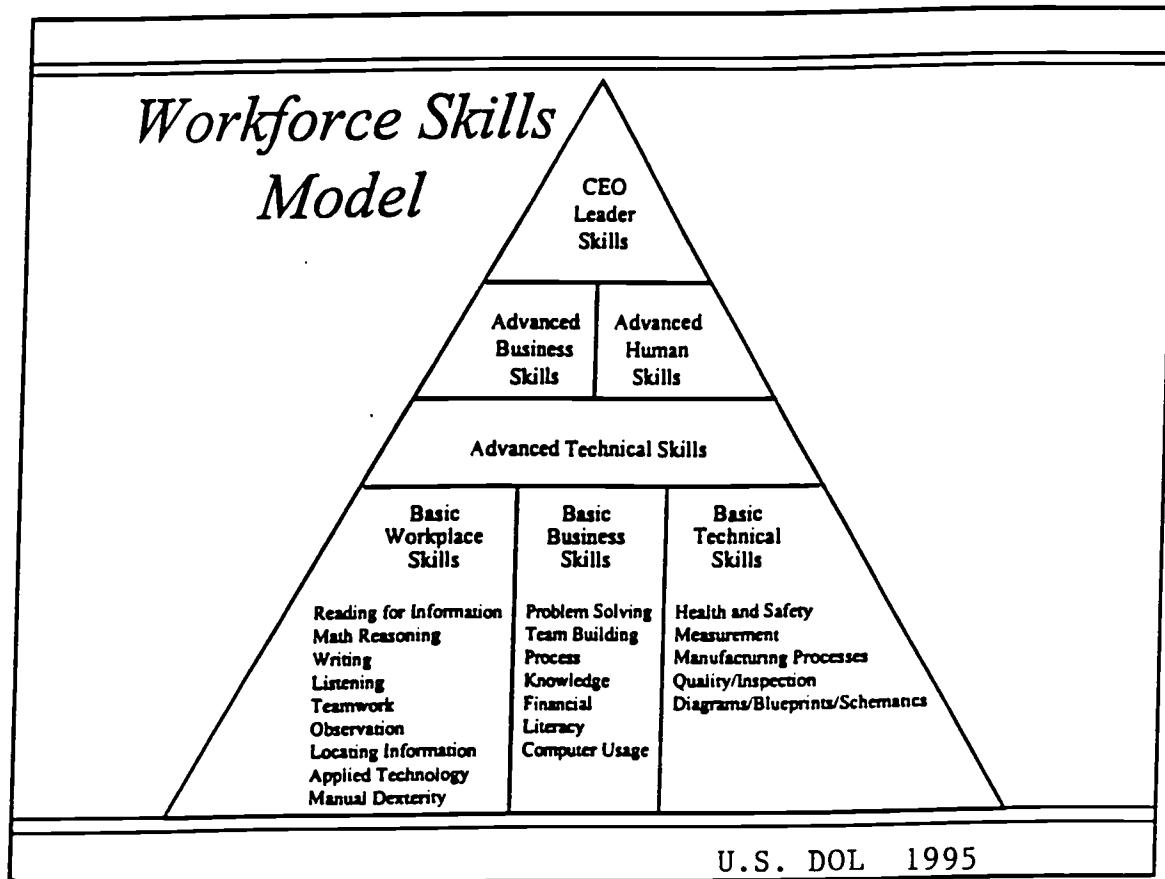
*Anticipated Skills Gap Between
1990 and 2005*

Number of people trained	Number of projected openings
1.1 million professional degrees	600,000
133,000 for precision production, craft and repair work	455,000

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1. Basic workforce development mismatch
2. Identification of a training/development imperative
3. Opportunity for blending technology and training expertise

APPENDIX B



1. Blend of SCANS skills and Technology Transfer
2. Cascade Process: Core skills and Technical specialization
3. Team Focus and Self-directed work group application

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Potential Benefits of Linking Workforce Development to Industry Skill Standards

- ◆ Remove cost, time, uncertainty and waste from selection and hiring process
- ◆ Make the process of selecting and hiring new workers more direct and efficient
- ◆ Create a pool of qualified people who have the knowledge, skills, abilities for entry-level positions in area firms

U. S. DOL 1995

1. Business/Industry - Education Partnerships
2. Integration of Applied Technology
3. Quick Response - Short Term Development
4. Creation of a 21st Century Workforce that provides a foundation for economic development

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